

Brain Dynamics Graduate School



Newsletter – December ‘24

*Let us know if you have an announcement, upcoming event, new publication or job posting!
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Events

- **Brain Dynamics Seminar Series**

06.12. 12:00 Paul Flechsig Institute - Center of Neuropathology and Brain Research, Room 3093, Liebigstraße 19 (Haus C), 04103 Leipzig

Prof Dr Erich Schröger, Wilhelm Wundt Institute for Psychology, Faculty of Life Sciences, Leipzig University

“From Fechner to Friston: attempts to study human cognition in the „Cognitive and Biological Psychology“ research group”.

<https://www.uni-leipzig.de/en/event-detail/event/from-fechner-to-friston-attempts-to-study-human-cognition-in-the-biocog-research-group>.

- **Guest Lecture at the MPI CBS**

09.12. 15:00 MPI CBS, Lecture Hall (C101), Stephanstraße 1A, 04103 Leipzig

Dr Risto Ilmoniemi, Professor emeritus, Senior Advisor at the Department of Neuroscience and Biomedical Engineering, Aalto University School of Science, Espoo, Finland

“Multi-locus TMS: network stimulation, automation, and versatility”.

<https://www.cbs.mpg.de/events/40102/338738>.

- **Language Circle**

11.12. 15:00 Hybrid: online & MPI CBS, Wilhelm Wundt Room (A400), Stephanstraße 1A, 04103 Leipzig

Prof Elana Zion Golumbic, PhD, Multidisciplinary Brain Research Center, Bar-Ilan University, Ramat-Gan, Israel

“The neural underpinnings of attention and distraction in (virtual) realistic environments”.

<https://www.cbs.mpg.de/events/40026/338738>.

- **Klinisch-Neurowissenschaftliches Kolloquium**

11.12. 16:30 University Hospital Leipzig, Haus 4: Meeting Room "Justus von Liebig", Liebigstraße 18, 04103 Leipzig

PD Dr Sae-Yeon Won, FEBNS, Department of Neurosurgery, University of Rostock

„Surgical management and future perspective of cerebellar stroke“.

https://www.uniklinikum-leipzig.de/veranstaltungen/Seiten/Veranstaltung_6227.aspx.

- **Studium universale**

18.12. 19:00 Großer Hörsaal, Institute of Anatomy, Liebigstraße 13, 04103 Leipzig

Prof Dr Ingo Bechmann, Institute of Anatomy, Faculty of Medicine, Leipzig University

“Bachs Schädel”.

<https://www.uni-leipzig.de/veranstaltungsdetail/termin/bachs-schaedel>.

News

- **Doctoral Research Training Group NeuroTune starting in 2025**

NeuroTune is an interdisciplinary Research Training Group (RTG), which explores molecular mechanisms that modify the way information is transmitted and received by neurons. The first five-year funding period is based on 40 doctoral research projects in Life Sciences and Medicine at Leipzig University:

<https://www.lw.uni-leipzig.de/en/institut-fuer-biologie/abteilungen/tierphysiologie/forschung/neurotune>.

- **ERC Consolidator Grant for Prof Dr Robert Fledrich**

Professor Robert Fledrich from the Institute of Anatomy at the Faculty of Medicine, has been awarded an ERC Consolidator Grant by the European Research Council (ERC) for his work on the regeneration of the peripheral nervous system:

<https://www.uni-leipzig.de/en/newsdetail/artikel/erc-consolidator-grant-for-research-on-nerve-disorders-2024-12-03>.

- **Call for Inter-Lab Pilot Projects extended until 31st December**

The Inter-lab Pilot Project program offers funding in the amount of up to 3.500€ to support multi-lab, multidisciplinary pilot projects in humans and/or animal models. The objective of the Pilot Project program is to enable Brain Dynamics members to collect and/or analyse preliminary data in preparation for grant applications to local, national and international funding agencies.

<https://www.uni-leipzig.de/en/brain-dynamics/graduate-school-brain-dynamics/news-events/pilot-projects>

New members

We welcome two new doctoral students to the Brain Dynamics family:

- **Nicolas Höck**

Research Group Eilers, Carl Ludwig Institute of Physiology, Faculty of Medicine

Research project: “Influence of spreading depolarizations on the neuronal ATP content - role of NMDA receptors”

<https://www.uniklinikum-leipzig.de/einrichtungen/physiologie/en/departement-ii/research>

- **Suong Welp**

Research Group Schönwiesner, Institute of Biology, Faculty of Life Sciences

Research project: “Predictive coding models of auditory verbal hallucinations”

<https://www.lw.uni-leipzig.de/en/institut-fuer-biologie/abteilungen/general-zoology-and-neurobiology>

Latest publications

- Brain Dynamics doctoral candidate **Alexandra John** and research group **Valk**

Microstructural asymmetry in the human cortex.

Wan B, Saberi A, Paquola C, Schaare HL, Hettwer MD, Royer J, John A, Dorfschmidt L, Bayrak Ş, Bethlehem RAI, Eickhoff SB, Bernhardt BC, Valk SL.
Nat Commun. 2024 Nov 22;15(1):10124. doi: 10.1038/s41467-024-54243-9.

- Brain Dynamics doctoral candidate **Sarah Schrempel** and research groups **Morawski / Roßner**

Identification of isoAsp7-A β as a major A β variant in Alzheimer's disease, dementia with Lewy bodies and vascular dementia.

Schrempel S, Kottwitz AK, Piechotta A, Gnoth K, Büschgens L, Hartlage-Rübsamen M, Morawski M, Schenk M, Kleinschmidt M, Serrano GE, Beach TG, Rostagno A, Ghiso J, Heneka MT, Walter J, Wirths O, Schilling S, Roßner S.
Acta Neuropathol. 2024 Dec 3;148(1):78. doi: 10.1007/s00401-024-02824-9.

- Brain Dynamics postdoc **Karl Schoknecht** and research group **Eilers**

Brain-to-blood transport of fluorescein in vitro.

Schoknecht K, Eilers J.
Sci Rep. 2024 Oct 26;14(1):25572. doi: 10.1038/s41598-024-77040-2.

- Research groups **Stassart / Bechmann**

Detection of molecular markers of ferroptosis in human Alzheimer's disease brains.

Mayr E, Rotter J, Kuhrt H, Winter K, Stassart RM, Streit WJ, Bechmann I.
J Alzheimers Dis. 2024 Nov 11: 13872877241296563. doi: 10.1177/13872877241296563.

- Research group **Müller**

Repetition of critical search features modulates EEG lateralized potentials in visual search.

Oxner M, Mazza V, Müller MM.
Cereb Cortex. 2024 Nov 5; 34(11): bhac450. doi: 10.1093/cercor/bhac450.

- Research group **Selcho**

Whole-brain annotation and multi-connectome cell typing of *Drosophila*.

Schlegel P, Yin Y, Bates AS, Dorkenwald S, Eichler K, Brooks P, Han DS, Gkantia M, Dos Santos M, Munnely EJ, Badalamente G, Serratos Capdevila L, Sane VA, Fragniere AMC, Kiassat L, Pleijzier MW, Stürner T, Tamimi IFM, Dunne CR, Salgarella I, Javier A, Fang S, Perlman E, Kazimiers T, Jagannathan SR, Matsliah A, Sterling AR, Yu SC, McKellar CE; FlyWire Consortium; Costa M, Seung HS, Murthy M, Hartenstein V, Bock DD, Jefferis GSXE.
Nature. 2024 Oct;634(8032):139-152. doi: 10.1038/s41586-024-07686-5. Epub 2024 Oct 2.

Neuronal wiring diagram of an adult brain.

Dorkenwald S, Matsliah A, Sterling AR, Schlegel P, Yu SC, McKellar CE, Lin A, Costa M, Eichler K, Yin Y, Silversmith W, Schneider-Mizell C, Jordan CS, Brittain D, Halageri A, Kuehner K, Ogedengbe O, Morey R, Gager J, Kruk K, Perlman E, Yang R, Deutsch D, Bland D, Sorek M, Lu R, Macrina T, Lee K, Bae JA, Mu S, Nehoran B, Mitchell E, Popovych S, Wu J, Jia Z, Castro MA, Kemnitz N, Ih D, Bates AS, Eckstein N, Funke J, Collman F, Bock DD, Jefferis GSXE, Seung HS, Murthy M; FlyWire Consortium.
Nature. 2024 Oct;634(8032):124-138. doi: 10.1038/s41586-024-07558-y. Epub 2024 Oct 2.

➤ Research groups **Valk / Villringer**

Personality traits vary in their association with brain activity across situations.

Hardikar S, McKeown B, Turnbull A, Xu T, Valk SL, Bernhardt BC, Margulies DS, Milham MP, Jefferies E, Leech R, Villringer A, Smallwood J.

Commun Biol. 2024 Nov 12;7(1):1498. doi: 10.1038/s42003-024-07061-0.

Macro-scale patterns in functional connectivity associated with ongoing thought patterns and dispositional traits.

Hardikar S, Mckeown B, Schaare HL, Wallace RS, Xu T, Lauckener ME, Valk SL, Margulies DS, Turnbull A, Bernhardt BC, Vos de Wael R, Villringer A, Smallwood J.

Elife. 2024 Nov 20;13:RP93689. doi: 10.7554/eLife.93689.